IN THE CLAIMS

1.   (Currently Amended) A wireless data communication system having extended power of capability comprising:

(a)   a first station linked to a second station which serves as an access point (AP) to support packet communication, voice or data;

(b)   monitoring apparatus at the access point (AP) which sorts packets according to a Continuously Aware Mode (CAM) or Power Saving Model (PSM) mode; and

(c)   transmitting apparatus which transmits immediately CAM packets to the first station while PSM packets are buffered by the access point (AP) and held until requested by the first station when in a Power Saving Poll (PSP) mode; and

(d)   measuring apparatus at the first station which receives the CAM packets and measures CAM packet arrival time for determining a safe period for turning off the receiver between CAM packets based upon an expected arrival time of the CAM packets.

2.   Cancel.

3.   (Original) The system of Claim 1 wherein the measuring apparatus further comprises:

(e)   "jitter" measuring apparatus which measure "jitter" associated with packet arrival intervals.

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4.   (Original) The system of Claim 1 further comprising:

(f)   "sleep" apparatus responsive to the measuring apparatus which awakens the first station for receiving packets based upon the safe period.

5.   (Original) The system of Claim 1 wherein the access point and the first mobile unit operate under the IEEE 802.11 standard.

6.   (Original) The system of Claim 1 further comprising:

(g)   first station comparing apparatus which compares the ith actual packet arrival time [A(i)] to expected packet arrival time (P).

7.   (Original) The system of Claim 6 further comprising:

(h)   first station determining apparatus which determines the state of the PSP mode as "O" or disable or "1", enabled but in trouble, or "2", enabled.

8.   (Original) The system of Claim 7 further comprising:

(i)   first station processing apparatus which operates when AI (i) does not approach P and waits for the next packet if the PSP state is O or waits for the next packet if the PSP mode is "1" with no good packet intervals and reduces the "Power Off" time by a slight amount when the PSP mode is 2 or enabled.

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9.   (Original) The system of Claim 8 further comprising:

(j)   first station measuring apparatus which determines an extended "Power Off" time between packets as [P-Standard Deviation of Consecutive Packet Arrival Time AI (I, i+1, i+2) – Receiver Stabilizing Time after "Power On"] when in the "0" mode and AI (i) approaches P or if the PSP mode is "1" or "2" waiting for the arrival of the next packet whereupon the "Power Off" mode is extended beyond normal "Power Off" time due to the periodic nature of the voice traffic.

10.   (Currently Amended) A method for extended "Power Off" period for a wireless communication system comprising:

(a)   waiting for continuosly aware mode packet arrival at a mobile unit in the wireless communication system, wherein packets are sorted into continuously aware mode packets and power save mode packets, and wherein the continuously aware mode packets are transmitted immediately by an access point and the power save mode packets are buffered at the access point;

(b)   comparing actual packet time [AI(i)] versus P or expected packet arrival time for continuously aware mode packets;

(c)   determining the status of a PSP mode as "O" or enabled; "1" or in trouble, or "2" enable;

(d)   returning to Step b, if AI-(i) does not approach P and the PSP mode is 0 or 1, and reducing the Power Off time, if the PSP mode is 2;

(e)   determining the PSP mode if AI-(I) approximates P;

(f)   returning to Step a, if the PSP mode is 1 or 2; and

(g)   calculating an extended Power Off time.

11.   (Original) The method of Claim 10 further comprising the step of:

(i)   reducing the "Power Off" time by a slight amount when the PSP mode is 2 or

enabled when AI-(i) does not approach P and waits for the next packet if the PSP state is 0 or

waits for the next packet if the PSP mode is "1" with no good packet intervals.

12.   (Original) The method of Claim 11 further comprising the step of:

(h)   waiting for the arrival of the next packet AI-(i) which approaches P or if the PSP

mode is "1" or "2".

13.   (Original) The method of Claim 12 wherein the actual packet arrival time [AI(i)]

= Current Arrival Time (CT) – Last Packet Arrival Time (LT) and LT=CT.

14.   (Currently Amended) The method of Claim 13 wherein preferably the extended

Power Off Time is [P – Standard Deviation (AI(i), AI-(i-1), AI-(i-2) – Receiver Start Up Time

(RSU)] when the PSP is 0, whereby an extended Power Off time is achieved by the periodic

nature of the packet arrival time.

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15. (Currently Amended) A medium, executable in a computer system, for extended "Power Off" period for a wireless communication system comprising:

(a) program instruction for waiting for packet arrival at a mobile unit in the wireless communication system, wherein packets are sorted into continuously aware mode packets and power save mode packets, and wherein the continuously aware mode packets are transmitted immediately by an access point and the power save mode packets are buffered at the access point;

(b) program instruction for comparing actual packet time [AI(i)] versus P or expected packet arrival time for the continuously aware mode packets;

(c) program instruction for determining the status of a PSP mode as "0: or enabled; "1" or in trouble, or "2" enable;

(d) program instruction for returning to Step b, if AI-(i) does not approach P and the PSP mode is 0 or 1, and reducing the Power Off time, if the PSP mode is 2;

(e) program instruction for determining the PSP mode if AI-(I) approximates P;

(f) program instruction for returning to Step a, if the PSP mode is 1 or 2; and

(g) program instruction for calculating an extended Power Off time.

16. (Original) The medium of Claim 15 further comprising the step of:

(h) program instruction for reducing the "Power Off" time by a slight amount when the PSP mode is 2 or enabled when AI-(i) does not approach P and waits for the next packet if

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the PSP state is 0 or waits for the next packet if the PSP mode is "1" with no good packet intervals.

17. (Original) The medium of Claim 16 further comprising the step of:

(i) program instruction for waiting for the arrival of the next packet AI(i) which approaches P or if the PSP mode is "1" or "2".

18. (Original) The medium of claim 17 wherein the actual packet arrival time [AI-(i)] = Current Arrival Time (CT) – Last Packet Arrival Time (LT) and LT=CT.

19. (Currently Amended) The medium of Claim 18 wherein preferably the extended Power Off Time is [P – Standard Deviation [AI-(i), AI-(i-1), AI-(i-2) – Receiver Start Up Time (RSU)] when the PSP is 0, whereby an extended Power Off time is achieved by the periodic nature of the packet arrival time.

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